

**PSEUDOTSUGA MENZIESII – TSUGA HETEROPHYLLA /  
GAULTHERIA SHALLON – HOLODISCUS DISCOLOR**

Douglas-fir – western hemlock / salal – oceanspray

Abbreviated Name: PSME-TSHE/GASH-HODI

Sample size = 13 plots

**DISTRIBUTION:** This association occurs mostly on the north-east Olympic Peninsula (Clallam and Jefferson counties), and in western Whatcom, western Skagit, and Island counties. Elsewhere in the Puget Trough, it is uncommon to rare and may be absent entirely from Kitsap, Mason, and Clark counties. It also occurs in the northern and eastern Olympic Mountains.

**GLOBAL/STATE STATUS:** G2G3S2S3. There are less than 10 known high-quality occurrences, with perhaps additional ones in the Olympic Mountains. At least within the Puget Trough, the vast majority of stands have been significantly degraded by past logging. Ongoing threats include development and effects of fragmentation.

**ID TIPS:** Salal occupies >10% cover and oceanspray occupies >3% cover or is more abundant than dwarf Oregongrape. Sword fern, evergreen huckleberry, and Pacific rhododendron are absent or in low abundance (refer to key).

**ENVIRONMENT:** These sites are moderately dry to slightly dry and appear to be relatively nutrient-poor. Sites are flat to moderately sloping and mostly on sunny aspects (Southeast to West). Slope position is mostly plain/plateau or mid-slope. Parent material is mostly glacial till, outwash, or drift. Soil textures are mostly loam to loamy sand with abundant coarse fragments. This association is more common in dry climatic zones than in other climates.

Precipitation: 20-54 inches (mean 32)

Elevation: sea level - 1500 feet

Aspect/slope: SE to W, various/ 0-48% (mean 15)

Slope position: mid, plain, short, upper

Soil series: Baldhill, Clallam, Everett, Guemes, Hoypus, Keystone, Revel, Roche, Swinomish, Tenino

**DISTURBANCE/SUCCESSION:** Fire is the primary natural disturbance. Old-growth stands show evidence of past low- to moderate-severity fire (underburns). Western hemlock and/or

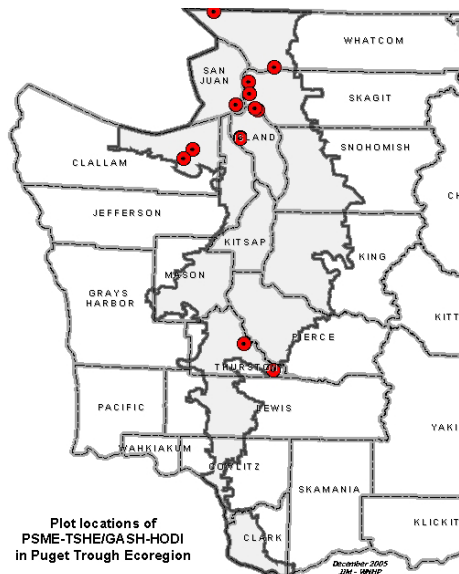
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**Vegetation Composition Table (selected species):**

Con = constancy, the percent of plots within which each species was found;  
Cov = cover, the mean crown cover of the species in plots where it was found;  
+ = trace (< 0.5% cover).

<b>Trees</b>	<b>Kartesz 2005 Name</b>	<b>Con Cov</b>	
Douglas-fir	Pseudotsuga menziesii var. menziesii	100	65
western hemlock	Tsuga heterophylla	100	23
western redcedar	Thuja plicata	85	10
grand fir	Abies grandis	54	12
<b>Shrubs and Dwarf-shrubs</b>			
salal	Gaultheria shallon	100	55
oceanspray	Holodiscus discolor	100	9
red huckleberry	Vaccinium parvifolium	62	6
dwarf Oregongrape	Mahonia nervosa	62	4
trailing blackberry	Rubus ursinus ssp. macropetalus	62	2
baldhip rose	Rosa gymnocarpa	54	4
orange honeysuckle	Lonicera ciliosa	38	2
<b>Graminoids</b>			
western fescue	Festuca occidentalis	46	+
<b>Forbs and Ferns</b>			
bracken fern	Pteridium aquilinum var. pubescens	77	2
sword fern	Polystichum munitum	69	1
twinflower	Linnaea borealis ssp. longiflora	31	6
western starflower	Trientalis borealis ssp. latifolia	31	1

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western redcedar increase over time in the absence of disturbance, Douglas-fir decreases, though still remains prominent after hundreds of years. Young stands may have little hemlock or redcedar.

**VEGETATION:** This is a forest where Douglas-fir tends to dominate the uppermost canopy layer. Western hemlock is typically prominent to co-dominant and tends to dominate tree regeneration. Western redcedar (usually) and grand fir (sometimes) can be prominent to co-dominant as well. The well-developed shrub layer is dominated by salal. Oceanspray is always present and often prominent as a tall shrub layer. Red huckleberry, dwarf Oregongrape, trailing blackberry, and baldhip rose are other frequently occurring shrubs. The herb layer is not well developed and usually has small amounts of sword fern and bracken fern. Western fescue is present in about half the plots.

**CLASSIFICATION NOTES:** Also described by Chappell (1997, 2001). NatureServe (2005) classification will soon be revised to recognize this as an association. This association is the Puget lowland equivalent of TSHE/GASH-HODI on Olympic National Forest (Henderson et al. 1989).

**MANAGEMENT NOTES:** Stands that have not been previously harvested, especially old-growth and mature stands, should be considered for conservation status. These sites appear to be moderately low in productivity for tree growth.

Chappell, C.B. 2006. Upland plant associations of the Puget Trough ecoregion, Washington. Washington Department of Natural Resources, Natural Heritage Program, Olympia, WA. [<http://www.dnr.wa.gov/nhp/refdesk/communities/pdf/intro.pdf>].